WHAT IS CLAIMED IS:

1. A method of estimating the link quality of a channel, wherein a fading value of said channel is calculated to modify a signal-to-noise ratio of said channel thereby deriving the link quality of said channel.

2. A method of estimating the link quality of a channel composed of subcarriers over which OFDM packets are transmitted, the method comprising the steps of:

estimating a noise quantity (B) of said channel based on two long training symbols contained in a received OFDM packet transmitted over said channel;

summing the absolute values of estimated subcarrier gain values (H_k) of said subcarriers thereby obtaining an estimated channel gain value (A) of said channel;

estimating a fading value (F) of said channel based on said estimated subcarrier gain values; and

subtracting said fading value (F) from said estimated channel gain value to derive a channel gain measure (A-F), whereby the link quality of said channel is defined as a ratio of the channel gain measure (A-F) to the noise quantity (B).

3. The method as claimed in claim 2, the noise quantity estimating step further comprising:

receiving the first of said long training symbols from said channel to obtain a first subcarrier gain value $H_{k,1}$ for each of said sub-carriers, where k denotes the sub-carrier index;

receiving the second of said two long training symbols from said channel to obtain a second subcarrier gain value $H_{k,2}$ for each of said subcarriers; and

estimating the noise quantity according to the relationship $B = \sum_{k=1}^{N} \left| H_{k,1} - H_{k,2} \right|$, where N is the quantity of said subcarriers.

4. The method as claimed in claim 3, wherein said estimated subcarrier gain value (H_k) of each subcarrier is calculated based on said first and second subcarrier gain values.

5.The method as claimed in claim 4, wherein said estimated subcarrier gain value (H_k) of each subcarrier is an average value of said first and second subcarrier gain values.

6. The method as claimed in claim 3, wherein said fading value (F) is calculated according to the relationship $F = \sum_{k=1}^{N} \left| |H_k| - \frac{A}{N} \right|$.

7. The method as claimed in claim 4, wherein said fading value (F) is calculated according to the relationship $F = \sum_{k=1}^{N} \left| |H_k| - \frac{A}{N} \right|$.

8. The method as claimed in claim 5, wherein said fading value (F) is calculated according to the relationship $F = \sum_{k=1}^{N} \left| |H_k| - \frac{A}{N} \right|$.

9. An apparatus for estimating the link quality of a channel composed of subcarriers, said apparatus comprising:

channel gain estimating means for estimating a first and a second subcarrier gain values ($H_{k,1}$ $H_{k,2}$) for each subcarrier based on two sequentially received long training symbols of a received OFDM packet;

calculating means for calculating a noise quantity (B), a fading value (F) and an estimated channel gain value (A) based on said first and second subcarrier gain values; and

link quality calculating means for calculating the quality of said channel, wherein said link quality calculating means performs a subtraction of said fading value from said estimated channel gain value (A-F) to derive a modified channel gain value, whereby the quality of said channel is defined as a ratio of the modified channel gain value (A-F) to the noise quantity (B).

10. The apparatus as claimed in claim 9, wherein said calculating means calculates the noise quantity (B) based on relationship $B = \sum_{k=1}^{N} \left| H_{k,1} - H_{k,2} \right|$, where N is the quantity of said sub-carriers.

11. The apparatus as claimed in claim 9, wherein said calculating means further calculates an average value of said first and second subcarrier gain values ($H_{k,1}$ $H_{k,2}$) as an estimated subcarrier gain value (H_K) for each subcarrier.

12. The apparatus as claimed in claim 11, wherein said estimated channel gain value (A) is derived by summing the absolute values of said estimated subcarrier gain values (H_k).

13. The apparatus as claimed in claim 11, wherein said fading value (F) is calculated according to the relationship $F = \sum_{k=1}^{N} \left| |H_k| - \frac{A}{N} \right|$, where N is the quantity of subcarriers.

14. The apparatus as claimed in claim 12, wherein said fading value (F) is calculated according to the relationship $F = \sum_{k=1}^{N} \left| |H_k| - \frac{A}{N} \right|$, where N is the quantity of subcarriers.